

f

Week in Review: 06/02/03 –06/09/03

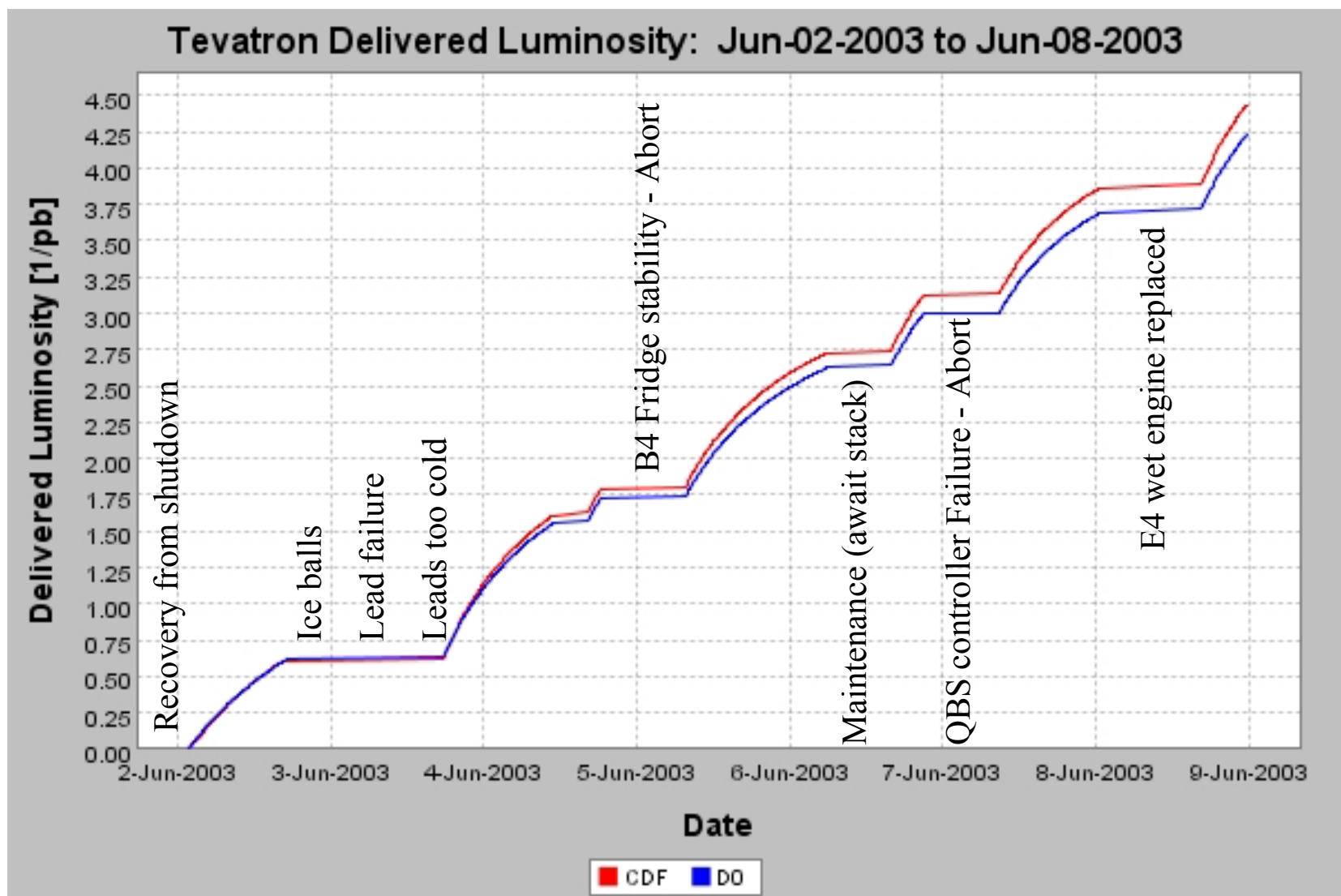
Keith Gollwitzer – FNAL

- Stores and Operations Summary
- Standard Plots

Stores Summary

Store	Initial Lum. (E30)	Deliv'd Lum. (nb ⁻¹)	Termination	Duration (hr)	Comments
2636	20.8	621	Intentional	15.3	Stack of 112mA; Not full 53MHz for 1 transfer
2642	31.2	976	Intentional	17.6	Stack of 174mA (shot 123mA)
2644	28.7	171	Abort	2.0	Stack of 169mA; ARF1 trip for 2 transfers B4 Fridge excursion led to unstable fridge
2646	26.5	923	Intentional	22.6	Stack of 111mA
2658	28.2	378	Abort	5.2	Stack of 121mA QBS Controller failure
2662	24.2	725	Intentional	16.2	Stack of 101mA
2665	29.9	838	Intentional	14.6	Stack of 157mA
2667	27.4	-	On Going	-	Stack of 127mA

Integrated Luminosity for the Week



- Lost Stores
 - B4 Fridge excursion of cooldown valve led to an unstable fridge condition which led to abort. May be seen seeing this problem and have been investigating (1st store lost to these excursions).
 - QBS Controller failed on NO A/C bit; aborted store
- Cool to too Cold
 - 3 ice balls found after power outages and recovery
 - Water is used to regulate temperature (problems last weekend)
 - 1 ice ball due to nitrogen leak; able to reseal
 - Leads to cold
 - Fafa



-
- TeV operation not quite recovered
 - Losses:
 - 150GeV when opening the helix
 - Start of ramp (more than usual)
 - Pbars at flattop; tune adjustments fix
 - Lifetime is quite a bit smaller than early May
 - TeV maintenance
 - ~12 hours of 3-bumps to locate apertures
 - Have done quick check of $\frac{1}{2}$ of TeV ring
 - C46 bump causes changes in tunes; strong sextupoles
 - Tunes up the ramp

12
10000
1300
60

Store 2642

Open Helix

Proton Load

Ramp

Pbar Load

Seconds

ONCE +

Total Protons

Total Current

Total Pbars

2nd set of Pbars

Tevatron Losses

Store 2662

1st Cogging

Ramp

Proton Load

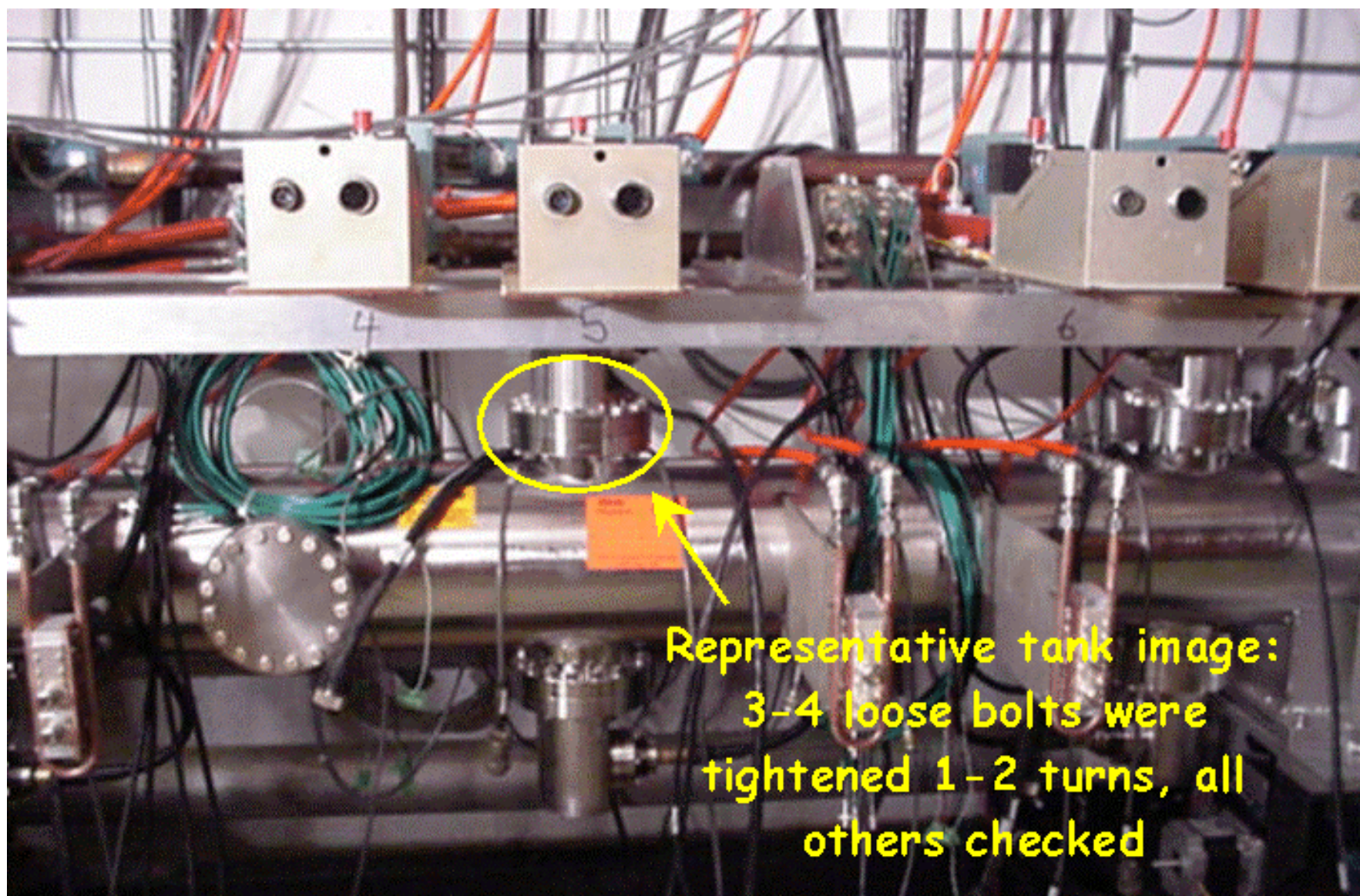
Pbar Load

Seconds

ONCE +

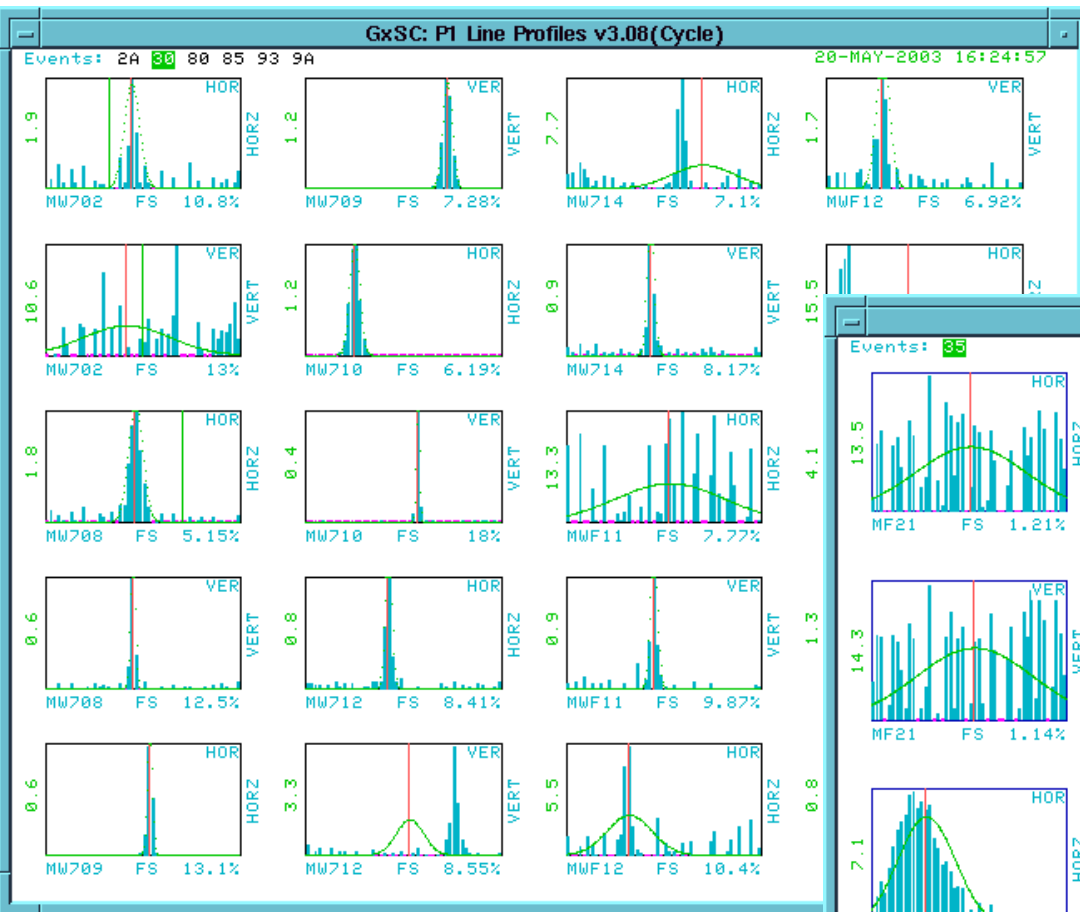
engineering units

-
- Lost Stack of 60mA
 - Debuncher vacuum leak closed vacuum valves
 - Other Pbar Problems
 - Lithium Lens LCW valve problem
 - Breaker at AP0 trip affecting AP2 and AP3 supplies
 - 95 degree LCW pump tripped
 - Water leak on A:A1S12 fixed during vacuum repair
 - Busy Proton Source with
 - Change outs of LRF5 and LRF1
 - MH2 regulation
 - MKS04 Kicker; cable termination
 - ORBMP water flow valve
 - Pulse shifter
 - Continuous tuning of LINAC and Booster
 - SY120: 1 short and 1 longer beam period



f

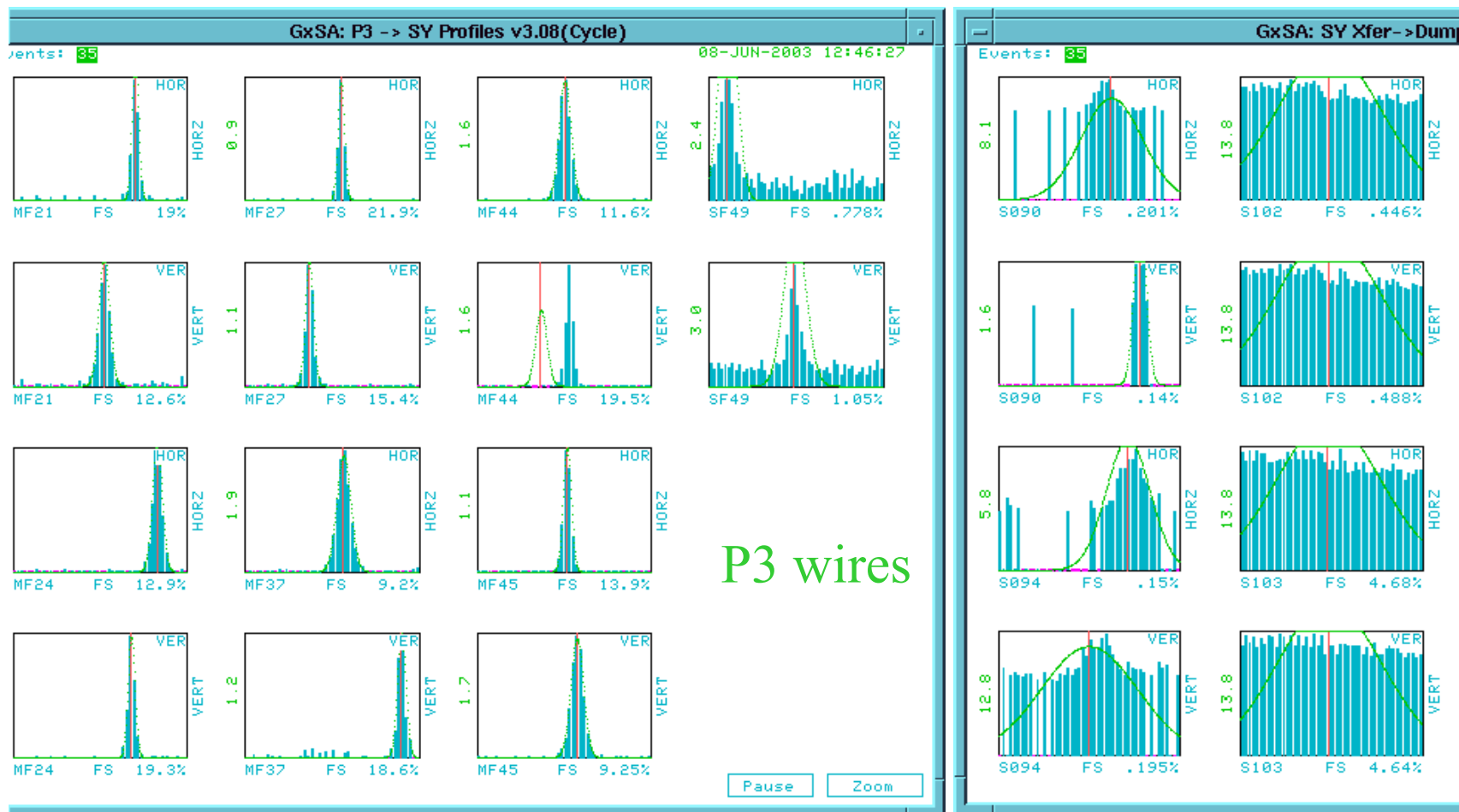
SY120: Last week “spraying into P3”



P1 and P2 wires

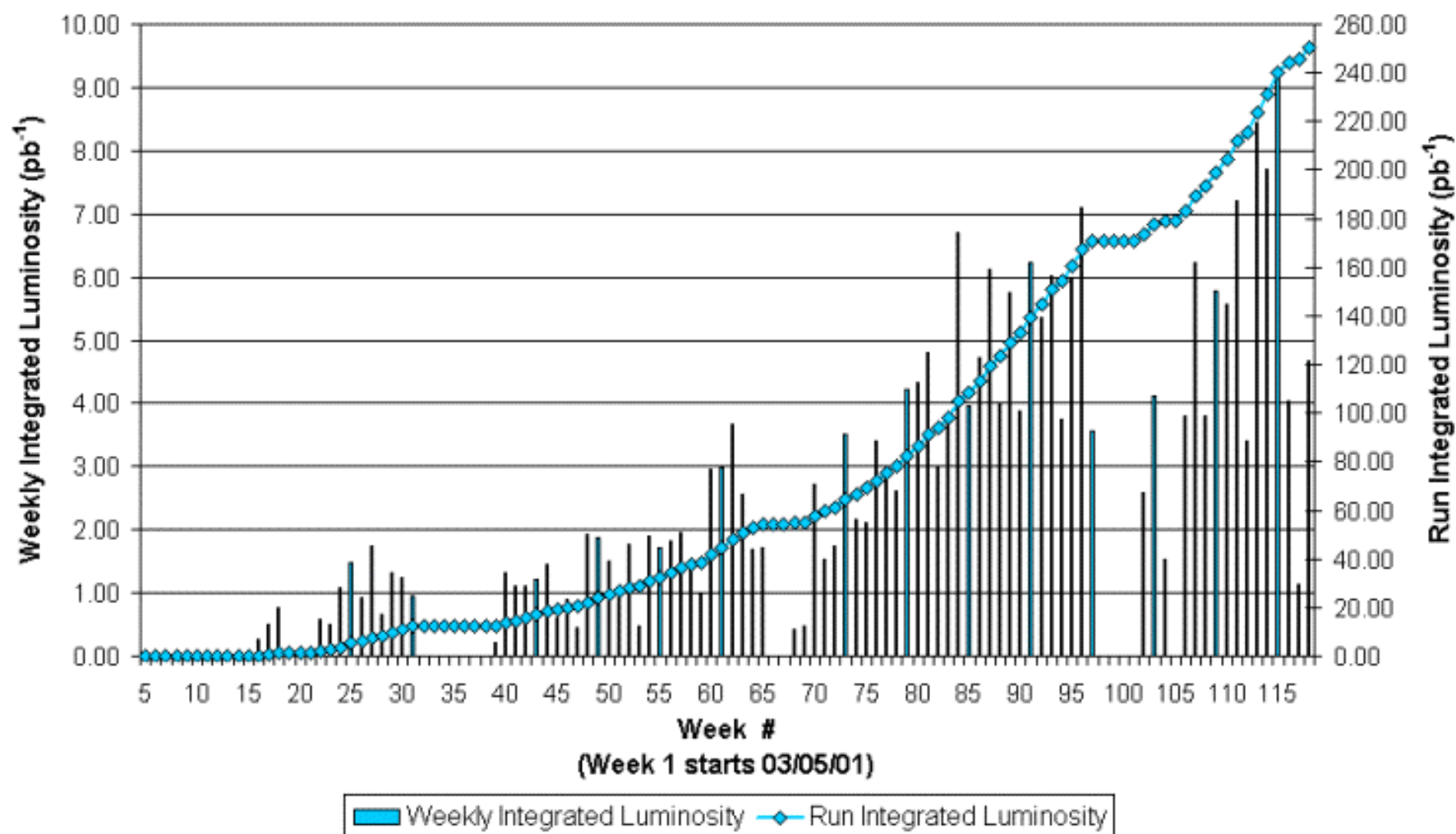


SY120 Progress: P1+P2+P3 into transfer hall

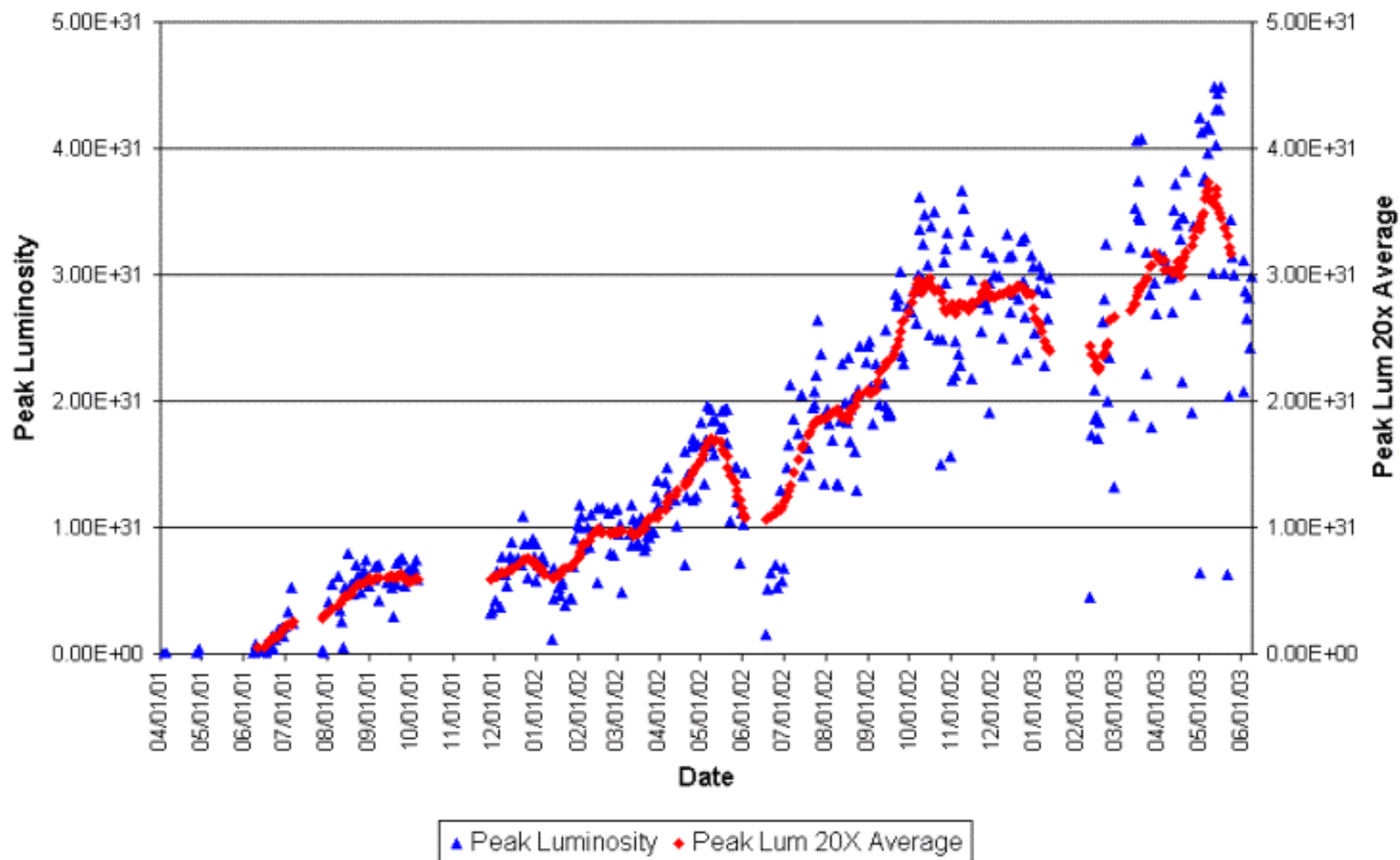


Made use of E4 fridge replacement to have ~6hrs of beam

Collider Run IIA Integrated Luminosity



Collider Run IIA Peak Luminosity



- The week
 - Many problems (some recovery related?)
 - 86hrs of stores
 - TeV maintenance when
 - 2 stores aborted early
 - 1 lost stack
 - SY120 beam progress
- FY03 total is 156pb^{-1} ; 11 weeks to shutdown
- Goal for this week
 - Stack and Store
 - Will do at least one between stores TeV maintenance period(s)
 - Reduction of strong sextupole at C46
 - Continue 3-bump aperture scan of TeV